

## Application for Industrial Wastes Discharge Permit

Date February 5, 1980No. 004-81-4

A. Name of Organization Fairchild Camera & Instrument Corporation  
Address 464 Ellis Street, Mtn. View, Ca 94042  
Address of Point of Discharge 644 National Ave., Mtn. View, Ca Bldg. #18  
Individual Responsible Name Gregory Geary Telephone (415) 962-4773  
for industrial waste Signature Gregory Geary ex (408) 371-3532  
Attach Map Showing Point of Discharge, Sampling Points, and Waste Treatment Facility.

B. Flow Rate: Average 111,000 gals/day Max. 122,000 gals/day Peak Hourly 115 GPM

## C. Submit separate statement:

1. Detailing type of industry and nature of products
2. Listing chemicals used and approximate concentrations
3. Describing waste treatment facilities
4. Giving characteristics of exceptional industrial wastes
5. Concerning radioactive wastes
6. Naming organic solvents discharged and concentration at point of discharge

## D. Indicate the point of discharge concentration of the following characteristics and mass emission rates where applicable.

Biochemical oxygen demand (B.O.D.)	<u>50</u> mg/l	Grease and oil, total	<u>0</u> mg/l
Chemical oxygen demand (C.O.D.)	<u>100</u> mg/l	Hydrogen Ion content pH	<u>5.5 - 10.0</u>
Total Solids, Average	<u>400</u> mg/l	Fluoride	<u>5.0</u> mg/l
Suspended Solids, Average	<u>200</u> mg/l	Chlorine demand	<u>5.0</u> mg/l
Temperature	<u>60</u> °F		

	Max. Conc. Allowable mg/l	Allowable Mass Emission Rate kg/day		Max. Conc. Allowable mg/l	Allowable Mass Emission Rate kg/day
Arsenic	<u>0.1</u>	<u>0.01</u>	Formaldehyde	<u>5.0</u>	<u>0.5</u>
Barium	<u>5.0</u>	<u>0.5</u>	Lead	<u>0.5</u>	<u>0.05</u>
Beryllium	<u>1.0</u>	<u>0.1</u>	Manganese	<u>1.0</u>	<u>0.1</u>
Boron	<u>1.0</u>	<u>0.1</u>	Mercury	<u>0.05</u>	<u>0.005</u>
Chlorine	<u>50.0</u>	<u>5.0</u>	Nickel	<u>1.0</u>	<u>0.1</u>
Cadmium	<u>0.1</u>	<u>0.01</u>	Chloroform	<u>50.0</u>	<u>5.0</u>
Chromium Hexavalent	<u>1.0</u>	<u>0.1</u>	Phenols	<u>1.0</u>	<u>0.1</u>
Chromium Total	<u>2.0</u>	<u>0.2</u>	Selenium	<u>2.0</u>	<u>0.2</u>
Cobalt	<u>1.0</u>	<u>0.1</u>	Silver	<u>5.0</u>	<u>0.5</u>
Copper	<u>1.0</u>	<u>1.0</u>	Zinc	<u>5.0</u>	<u>0.5</u>
Cresols	<u>2.0</u>	<u>0.2</u>			
Cyanides	<u>1.0</u>	<u>0.1</u>			

## NOT TO BE COMPLETED BY APPLICANT

Permit to Discharge Industrial Wastes in Accordance with This Application Approved Subject to Attached General and Specific Conditions

Allen Shelley, Director of Public Works

Signature

Allen Shelley

Date

2-5-80

Permit to Discharge Exceptional Industrial Waste Approved  
List Details:

Allen Shelley, Director of Public Works

Signature

Date

DISTRIBUTION: Original to Industrial Waste File, Copy to Discharger, Copy to Water Quality Control Plant, Copy to Palo Alto, Copy to Sewer Division.



**36** Systems Tech  
1725 Technology Drive  
San Jose, CA 95110

**80** Diode Plant  
4300 Redwood Hwy.  
San Rafael, CA - 1903

**30** Palo Alto Facility  
4001 Miranda Avenue  
Palo Alto, CA 94304

**25** Healdsburg Facility  
33 Healdsburg Avenue  
Healdsburg, CA 95448

**42** South San Jose Facility  
101 Bernal Road  
San Jose, CA 95139

**46** Exetron Plant  
3105 Alfred Street  
Santa Clara, CA 95050

Middlefield Road

Whisman Road

Parking  
Deck

20  
Headquarters

Ellis Street

Translator Plant

Plant  
Protection

Credit  
Union

Plating

National Avenue

National Avenue

Fairchild Drive



FAIRCHILD MOUNTAIN VIEW COMPLEX

Security Department - 4/78

APPLICATION FOR INDUSTRIAL WASTES DISCHARGE PERMIT, ITEM C.

Type of Industry and Nature of Products

Fairchild Semiconductor processes silicon metal into electronic semiconductor devices.

Chemicals used in semiconductor device processing are:

<u>Gases</u>	<u>Liquids</u>	<u>Liquids</u>
Nitrogen	Sulfuric acid	Methanol
Hydrogen	Nitric acid	Isopropanol
Oxygen	Hydrofluoric acid	Methylene chloride
Argon	Hydrochloric acid	Trichloroethane
Hydrogen chloride	Acetic acid	Detergents
Chlorine	Phosphoric acid	Aluminum sulfate
Compressed air	Ammonium fluoride	Sodium carbonate
Ammonia	Ammonium hydroxide	Sodium hydroxide
	Acetone	Freon
		Glycerin
		Xylene

Waste treatment facilities

In Building No. 18 a cyanide destruction system operates to destroy and convert cyanides to nitrogen and carbon dioxide. The final effluent is neutralized to a pH between 6 and 9.

Characteristics of exceptional industrial wastes. None.

No radioactive wastes are discharged.

Organic solvents are captured for storage and recycling.

ADDITIONAL INFORMATION REGARDING THE I.W. PERMIT  
FOR BUILDING 1, 2 & 3

- (1) The LIC relocation to Building 1 will remove production at Building 20, resulting in a transfer of water flow within the Mountain View complex (not a water flow increase).
- (2) The conversion from 3" to 4" wafers by LIC will result in a 44% increase in production with no increased labor or water usage.
- (3) A BPM group will move from Building 20 to the South San Jose facility in the second quarter of 1980, eliminating the flow from this operation.
- (4) The BPM operations that remain in Mountain View will convert from 3" to 4" wafers, resulting in a 44% production increase with no increased labor or water usage.
- (5) The Transistor group will be moving to the San Rafael facility, resulting in the elimination of flow from this operation.
- (6) A 6 month feasibility study will be performed on 300 gpm D.I. Water reclaim and 600 gpm treated effluent reclaim.
- (7) Pending favorable completion of the feasibility studies, construction of the above reclaim systems will take an estimated 2 years (depending upon economic climate).
- (8) The projected flow rates from the new system were based on peak water usage at full production rates, actual flow rates will be less.
- (9) The relocation of LIC at Building 1 will not be fully operational until 1-2 years after start-up.
- (10) Actual flow rates can only be measured after the system is installed. Loss of water via cooling towers is known to be significant.
- (11) Planning is under way to convert to 5" wafers. This would yield a 63% production increase over today's output without increasing labor or water usage.
- (12) The vast majority of construction projects at FC & I are based on technological advances to increase yields, not new production that requires more labor or water usage.
- (13) Even without the above, the new neutralization pit would not increase our total water discharge but would tend to only balance the discharge from two locations.

Industrial Waste Discharge Permit

NO. 004-81-4

ADDRESS: 464 Ellis Street, Mountain View, Calif. 94043

## GENERAL CONDITIONS

1. This permit is issued under the ordinances and regulations of the City of Mountain View currently in effect, but all discharges hereunder shall comply with all ordinances and regulations of the City and all other applicable local, state, and federal regulations, whether now in effect or hereafter adopted or amended.
2. Any violation of the terms of this Permit or the ordinances or regulations of the City shall be grounds for revocation.
3. If any proposed revisions in plant operations are expected to cause significant changes in waste water quality or quantity (25 percent or more, or 25,000 gallons per day) from that given in approved Permit information, an application for an amended permit must be submitted for approval detailing the nature of the changes.
4. In accordance with Section 35.32.8 of the City Code, accidental discharges of industrial wastes shall be reported immediately to the Public Works Department, telephone number 967-7211, Ext. 270, during normal office hours, or to the Fire Department, telephone number 968-4415, on holidays or after normal office hours AND to the Palo Alto Regional Water Quality Control Plant, telephone number 329-2598 so that appropriate countermeasures may be taken.
5. This Permit is not transferable without prior written consent of the Director of Public Works. In general, a change of ownership will require a new permit.
6. The issuance of this permit does not constitute a warranty that the design capacity of the sewage collection and treatment system is sufficient to accommodate peak sewage flows from all dischargers who may now or hereafter be connected to the system. Pursuant to Sec. 35.32.1(d) the City reserves the right to impose restrictions on sewage discharges where necessary in the judgment of the City to assure the proper functioning in the sewerage system.

### SPECIFIC CONDITIONS

1. This permit is for a period ending on April 1, 1981 if significant progress has been made in reducing total plant flow and approved pretreatment facilities have been installed.  
~~XX~~  
~~XX~~  
~~XX~~  
~~XX~~
2. This permit applies to industrial waste discharges at the following location(s) only:  
644 National Avenue  
\_\_\_\_\_  
Building No. 18  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
3. Your attention is called to the fact that flow rates shown on the permit application exceed per-acre design flows of the sewers serving the above locations. Restrictions or additional charges may be imposed in accordance with Sec. 35.32.1(d) of the City Code should peak sewage flows from the total upstream acreage approach the capacity of these sewers.